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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/736,320	12/15/2000	Jorgen Steijer	040010-897	8713

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EXAMINER

MEHRPOUR, NAGHMEH

ART UNIT PAPER NUMBER

2686

DATE MAILED: 07/15/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/736,320

Applicant(s)

STEIJER ET AL.

Examiner

Naghmeh Mehrpour

Art Unit

2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>5</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S. C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement filed reference listed in the information Disclosure submitted on 06/11/03 have been considered by the examiner (see attached PTO-1449

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Art Unit: 2686

4. Claims 1-30, are rejected under 35 U.S.C. 102(e) as being anticipated by Ostrup et al. (US Patent Number 6,292,664 B1).

Regarding claims 1, 16, 30, Ostrup teaches a method/control apparatus of managing resources in a radio communication network (101), the radio communication network comprising a first set of equipment (201, 205) and a second set of equipment (202, 206)(col 5 lines 42-55), the method comprising the steps of:

allocating (301) the first set of equipment (201, 205) to serve a first call (col 6 lines 66-67);

performing equipment reallocation (303), whereby the second set of equipment(202, 206) is allocated to serve the first call and the first set of equipment (201, 205)is released from the first call (see figure 3A, col 6 lines 59-65);

characterized in that the step of performing equipment reallocation is initiated upon determining (302), according to a predetermined rule based on differences in functional capabilities of the first set of equipment (201, 205) and the second set of equipment (202, 206) (col 7 lines 23-27), that it is desirable to serve the first call using the second set of equipment (202, 206) instead of the first set of equipment (201, 205) even though the first set of equipment (201, 205) is able to continue serving the first call (col 6 lines 59-65, col 8 lines 5-10).

Regarding claims 2, 17, Ostrup teaches a method/control apparatus wherein at least one difference in functional capabilities of the first set of equipment (201, 205) and the second set of equipment (202, 206) is that the first set of equipment (201, 205) supports at least one

Art Unit: 2686

communication service configuration not supported by the second set of equipment (202, 206) (col 5 lines 55-65, col 7 lines 33-37).

Regarding claims 3, 18, Ostrup teaches a method/control apparatus wherein at least one difference in functional capabilities of the first set of equipment (VSELP, for Full rate)(201, 205) and the second set of equipment (202, 206) is that the second set of equipment (PSI-CELP for half rate)(202, 206) is capable of handling a larger number of simultaneous calls having a certain communication service configuration (col 5 lines 55-65, col 6 lines 8-25, col 7 lines 33-37).

Regarding claims 4, 19, Ostrup teaches a method/control apparatus wherein the step of performing equipment reallocation involves initiating a handover of the first call (col 6 lines 34-45).

Regarding claims 5, 20, Ostrup teaches a method/control apparatus wherein the handover of the first call is a handover from a first cell (C1) to a second cell (C2) (col 6 lines 34-53).

Regarding claims 6, 21, Ostrup teaches a method/control apparatus wherein the handover of the first call is an intra cell handover of the first call in a first cell (C1) (col 6 lines 25-30), to perform handover between traffic channels in the same cell, i.e. so called intra cell handover. Intra cell handover may also be performed in connection with certain changes in the communication service configuration of a call. The following situations causes the mobile

Art Unit: 2686

services switching center to perform an intra cell handover in connection with communication service configuration changes. When a current communication service configuration of an established call is half rate PSI-CELP coded speech and a party involved in the call requests a change in communication service configuration to full rate non-speech data, an intra cell handover is necessary to switch from the current half rate traffic channel used to a full rate channel (col 3 lines 45-67, col 4 lines 1-23, col 7 lines 36-63).

Regarding claim 7, Ostrup teaches a method wherein the first set of equipment VSELP for full rate) is configured to handle a first set of communication channels and the second set of equipment (PSI-CELP for half rate) is configured to handle a second set of communication channels and wherein allocation of the first set of equipment to serve a call is performed by allocating a communication channel in the first set of communication channels to the call and release of the first set of equipment from a call is performed by releasing a communication channel in the first set of communication channels from the call while allocation of the second set of equipment (col 5 lines 55-65, col 6 lines 1-7) to serve a call is performed by allocating a communication channel in the second set of communication channels to the call and release of the second set of equipment PSI-CELP from a call is performed by releasing a communication channel in the second set of communication channels from the call (see figure 4, col 7 lines 1-13). This handover procedure from a HR to FR. At step 430, the associated MSC assigns a FR traffic channel (e.g., dual rate channel 412) to the call of MS 120. It should be noted that the invention also includes assigning any traffic channel that is higher than the lowest-possible bit rate for the call. At step 440, an Occupied Capacity Counter is incremented (by one in this

Art Unit: 2686

example of adding a FR channel), which count represents the current level of calls. It should be noted that the current level of calls need not be incremented in whole units and can be expressed in ratio terms instead of a number. When the Occupied Capacity Counter's count is a number, for example, it can be modified as follows: by +1 if a new FR channel is assigned; by -1 if a previously-busy FR channel becomes available; by +1/2 if a new HR channel is assigned; and by -1/2 if a previously-busy HR channel becomes available.

Regarding claims 8, 22, Ostrup teaches a method/control apparatus wherein the first set of equipment PSI-CELP includes a first type of transceiver and the second set of equipment PSVELP includes a second type of transceiver (see figure 1, col 3 lines 6-20).

Regarding claims 9, 23, Ostrup teaches a method/control apparatus wherein the first set of equipment includes a first type of transcoder VSELP and the second set of equipment includes a second type of transcoder PSI-CELP (col 3 lines 48-67, col 4 lines 1-23).

Regarding claims 10, 24, Ostrup teaches a method/control apparatus wherein the step of determining is performed upon release of the second set of equipment PSI-CELP from a second call (col 6 lines 42-45). This handover procedure from a HR to FR. At step 430, the associated MSC assigns a FR traffic channel (e.g., dual rate channel 412) to the call of MS 120. It should be noted that the invention also includes assigning any traffic channel that is higher than the lowest-possible bit rate for the call. At step 440, an Occupied Capacity Counter is incremented (by one in this example of adding a FR channel), which count represents the current level of

Art Unit: 2686

calls. It should be noted that the current level of calls need not be incremented in whole units and can be expressed in ratio terms instead of a number. When the Occupied Capacity Counter's count is a number, for example, it can be modified as follows: by +1 if a new FR channel is assigned; by -1 if a previously-busy FR channel becomes available; by +1/2 if a new HR channel is assigned; and by -1/2 if a previously-busy HR channel becomes available (See figure 4, col 7 lines 1-13).

Regarding claims 11, 25, Ostrup teaches a method/control apparatus wherein the step of determining is performed upon receiving a request for a third call which requires allocation of equipment supporting a communication service configuration not supported by the second set of equipment PSI-CELP (Half rate) but which is supported by the first set of equipment VSELP (Full rate) and the method further comprises a step of allocating the first set of equipment to serve the third call after being released from the first call (col 6 lines 37-48).

Regarding claims 12, 26, Ostrup teaches a method/control apparatus wherein the method comprises a step of monitoring available equipment supporting different communication service configurations and wherein the step of determining is performed upon detecting that, for at least one communication service configuration included in the at least one communication service configuration not supported (full rate/FH) by the second set of equipment PSI-CELP for half rate/HR), there is no available equipment (col 3 lines 58-67, col 4 lines 1-15). Thereafter, a Half-Rate 250 channel (corresponding to item (3) in Table 1, for example) is assigned to the requesting MSs 120-180. The channel assignment function 260 is shown as decreasing from a Full-Rate 240 channel assignment level to a Half-Rate 250 channel assignment level at the

Art Unit: 2686

HTTH value 230. It should be understood, however, that the first call assigned to a Half-Rate 250 channel may be the call that creates an HTTH 230 situation, or it may be the call immediately following the creation of an HTTH 230 situation, etc. In summary, each call initiated by a MS 120-180 is assigned a Full-Rate 240 channel by the MSC that is associated with the BS 110 to maximize voice quality until an occupied cell capacity 210 level equal to the HTTH value 230 is reached. Since, there is no available Full rate equipment is available, therefore, each subsequent request by a MS 120-180 is assigned a Half-Rate 250 channel to conserve available bandwidth (col 4 lines 43-58).

Regarding claims 13, 27, Ostrup teaches a method/control apparatus wherein said determining involves determining that it is desirable to serve a current communication service configuration of the first call using the second set of equipment PSI-CELP instead of the first set of equipment (201, 205) even though the first set of equipment VSELP is capable of handling the current communication service configuration of the first call (col 4 lines 15-29). The channel assignment function 260 is shown as decreasing from a Full-Rate 240 channel assignment level to a Half-Rate 250 channel assignment level at the HTTH value 230. It should be understood, however, that the first call assigned to a Half-Rate 250 channel may be the call that creates an HTTH 230 situation, or it may be the call immediately following the creation of an HTTH 230 situation, etc. In summary, each call initiated by a MS 120-180 is assigned a Full-Rate 240 channel by the MSC that is associated with the BS 110 to maximize voice quality until an occupied cell capacity 210 level equal to the HTTH value 230 is reached. Since, there is no

Art Unit: 2686

available Full rate equipment is available, therefore, each subsequent request by a MS 120-180 is assigned a Half-Rate 250 channel to conserve available bandwidth (col 4 lines 43-58).

Regarding claims 14, 28, Ostrup teaches a method/control apparatus wherein said determining is performed upon changing communication service configuration of the first call to a new communication service configuration and said determining involves determining that it is desirable to serve the new communication service configuration of the first call using the second set of equipment PSI-CELP instead of the first set of equipment VSELP even though the first set of equipment VSELP is capable of handling the new communication service configuration of the first call (col 7 lines 36-63). The channel assignment function 260 is shown as decreasing from a Full-Rate 240 channel assignment level to a Half-Rate 250 channel assignment level at the HTTH value 230. It should be understood, however, that the first call assigned to a Half-Rate 250 channel may be the call that creates an HTTH 230 situation, or it may be the call immediately following the creation of an HTTH 230 situation, etc. In summary, each call initiated by a MS 120-180 is assigned a Full-Rate 240 channel by the MSC that is associated with the BS 110 to maximize voice quality until an occupied cell capacity 210 level equal to the HTTH value 230 is reached. Since, there is no available Full rate equipment is available, and the HTTH exceed the limit. Therefore, each subsequent request by a MS 120-180 is assigned a Half-Rate 250 channel to conserve available bandwidth (col 4 lines 43-58).

Regarding claims 15, 29, Ostrup teaches a method/control apparatus wherein said determining is performed upon changing communication service configuration of the first call from a

Art Unit: 2686

communication service configuration not supported by the second set of equipment PSI-VSELP to a communication service configuration supported by the second set of equipment PSI-VSLEP (col 7 lines 34-43). The channel assignment function 260 is shown as decreasing from a Full-Rate 240 channel assignment level to a Half-Rate 250 channel assignment level at the HTTH value 230. It should be understood, however, that the first call assigned to a Half-Rate 250 channel may be the call that creates an HTTH 230 situation, or it may be the call immediately following the creation of an HTTH 230 situation, etc. In summary, each call initiated by a MS 120-180 is assigned a Full-Rate 240 channel by the MSC that is associated with the BS 110 to maximize voice quality until an occupied cell capacity 210 level equal to the HTTH value 230 is reached. Since, there is no available Full rate equipment is available, and the HTTH exceed the limit. Therefore, each subsequent request by a MS 120-180 is assigned a Half-Rate 250 channel to conserve available bandwidth (col 4 lines 43-58).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Schulz (US Patent 6,571,101B1) disclose method and radio communications system for controlling signaling

Austin (US Patent 6,608,827 B1) disclose method for increasing the communication capacity of a cellular telephone system

Art Unit: 2686

Petrus et al. (US Patent Number 6,690,747 B2) disclose for reference signal generation in the presence of frequency offsets in a communications station with spatial processing

Uhlink et al. (US Patent Number 6,600,914 B2) disclose system and method for emergency call channel allocation

6. **Any responses to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 308--6296, (for formal communications indented for entry)

Or:

(703) 308-6306, (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, Va., sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Melody Mehrpour whose telephone number is (703) 308-7159. The examiner can normally be reached on Monday through Thursday (first week of bi-week) and Monday through Friday (second week of bi-week) from 6:30 a.m. to 5:00 p.m.

Application/Control Number: 09/736,320


Page 12

Art Unit: 2686

If attempt to reach the examiner are unsuccessful the examiner's supervisor, Marsha Banks-Harold be reached (703) 305-4379.

NM

July 5, 2004


7/12/04
LESTER G. KINCAID
PRIMARY EXAMINER